

## Exposure to radiation

Each CT scan exposes a person to small amounts of radiation, but the amount of radiation is very small. By using the latest scanners, we can reduce the amount of radiation needed. The chance of the scan saving your life by detecting an early cancer is far greater than the chance of the scan causing you any harm.

**There is evidence that screening people based on their risk of lung cancer saves lives. Lung health checks help to work out who might benefit from a CT scan. They aim to detect cancer at an early stage.**

Lung cancer is a difficult disease to treat whenever it is diagnosed, but if it is detected early, treatment may be more likely to work.

## More About Radiation from Lung Cancer Screening with Low-Dose CT (LDCT) What are the risks?

The scientific unit of measurement for radiation dose, commonly referred to as effective dose, is the millisievert (mSv). Because different tissues and organs have varying sensitivity to radiation exposure, the actual radiation risk to different parts of the body from an x-ray procedure varies. The term effective dose is used when referring to the radiation risk averaged over the entire body.

In comparison, low dose CT scans used for lung cancer screening use an approximate effective radiation dose of 2mSv. That effective dose is approximately the same dose one gets from 6 months of background radiation.



## LOW DOSE CT SCANS

## What is a Lung Screening Scan?

In a lung cancer screening scan, we use a low-dose CT (computerised tomography) scan to check for the early signs of lung cancer, before you have any symptoms.

This is a special scan that uses a very low dose of radiation and a computer to take a detailed picture of your lungs.

## What happens during a lung screening scan?

During the scan, you will usually lie flat on your back on a bed that moves slowly into the CT scanner. The scanner is shaped like a ring, and it rotates around a small section of your body as you pass through it. Specially trained staff (called radiographers) control the scanner from behind a screen in the CT room. You will be able to see and speak to them during the scan. When a scan is taken, you will need to lie still and follow simple breathing instructions for 10 seconds. This makes sure the pictures are not blurred. The scan is painless, and you will be able to eat, drink or drive as normal after your scan.

### CONTACT US

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Risks	Benefits
There is a theoretical small risk of cancer from exposure to low-dose radiation. In heavy smokers or former smokers, the risk of lung cancer from smoking far outweighs the small theoretical risk of a radiation induced cancer, even if screening is done every year for 25 years	CT scanning is painless, non-invasive, and fast (a few seconds) and no radiation remains in a patient's body after a CT examination
'A nodule' has been found and a further scan is needed. It is not always possible to know what the cause of a nodule is from the CT scan alone.	Most nodules are benign (non-cancerous) and could be due to scarring from previous lung infections. We will keep an eye on the nodule by repeating the CT scan after a certain amount of time to see whether it grows or changes
CT scanning may not detect all cancers.	X-rays used in LDCT of the chest scans have no immediate side effects.
Not all the cancers detected by LDCT will be found in the early stage of the disease.	CT scans can detect very small nodules in the lung. LDCT of the chest may diagnose lung cancer at its earliest, most treatable stage.
	Lung cancer screening with LDCT has been proven to reduce the number of deaths from lung cancer in patients at high risk.
	There might be an incidental finding. This means there is no sign of lung cancer but there are signs of other problems on the scan that may need treatment or medical advice.